

**Midwestern Radioactive Materials Transportation Committee (MRMTC)  
Fall 2021 Meeting Summary**

Chicago, Illinois  
December 1 – 2, 2021

**AGENDA ITEMS**

**Wednesday, December 1 – Spent Nuclear Fuel (SNF) Transportation Tabletop**

**1. Table Setting and Introduction**

- a. Committee Chair Mike Snee (Ohio) welcomed everyone to Chicago and thanked them for attending the meeting. Mr. Snee made sure that all the Zoom/virtual attendees could hear him. He explained the general purpose of a tabletop exercise and the specific purpose of this day's exercise. Mr. Snee then gave the legal disclaimers and laid the ground rules for the exercise. He gave a quick background on the MRMTC and ten things to know about nuclear waste. Mr. Snee then laid out the tabletop's objectives, overview, and assumptions. Finally, he informed the attendees on how they could find the [reference materials](#) for today's discussion.

**2. Standard Contract Explanation and Discussion**

- a. Mr. Snee then welcomed Cyrus Nezhad, an Attorney-Advisor in the U.S. Department of Energy Office of General Counsel (DOE-GC). Mr. Nezhad is an expert on the Standard Contract and joined the meeting via Zoom for an explanation and discussion of the "Standard Contract." The Standard Contract for the Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste (HLW) is a contract between the United States of America, represented by the DOE, and a corporation organized and existing under the laws of a given state to dispose of SNF and/or HLW. This session works as a Q&A between Mr. Snee and Mr. Nezhad before opening the floor to all attendees. Mr. Nezhad answered the following questions.
  - i) What is the Standard Contract?
  - ii) Does DOE still follow the Standard Contract?
  - iii) Who are the parties involved under the Standard Contract?
  - iv) How does the Standard Contract establish a queue for shipping SNF?
    - (1) Is this queue liable to change based on federal government policy?
  - v) If a consent-based siting process is established, does the Standard Contract apply as written or would it need to be amended?
  - vi) At what point does ownership of the SNF transfer from the purchaser to DOE?
  - vii) What are the criteria for acceptance of the SNF?
  - viii) What are the rates purchasers must pay the DOE under the Standard Contract?
  - ix) How is DOE currently preparing/planning to meet the requirements of the contract?
- b. Mr. Snee then thanked Mr. Nezhad for his time and invited him to stay on the Zoom call for as long as he liked.

**3. Shutdown and Operating Site Evaluations**

- a. Mr. Snee announced the meeting would switch gears and learn about an ongoing DOE activity evaluating shutdown and operating nuclear power plants, including their transportation infrastructure. In addition to hearing an update on the project, the committee would learn how this information will inform future DOE SNF shipments. He then welcomed the project's lead, Steve Maheras of the Pacific Northwest National Laboratory (PNNL), to give his presentation.

- b. Mr. Maheras began his presentation covering the purpose of the site evaluations. The evaluations' processes include planning with federal, tribal, state, and state regional group (SRG) partners. All told, these planning activities typically take six months. During COVID-19-related closures, Mr. Maheras attempted a virtual site evaluation for the Morris Operation in Illinois. It did not work out how he had hoped and showed the need for boots-on-the-ground evaluations. Before going to the sites, Mr. Maheras conducts a great deal of site research using documents and data bases, including public documents, DOE documents, and nuclear industry sources. He also references nuclear power plant (NPP) SNF site inventories, which are based on the GC-859 Nuclear Fuel Data Survey and includes the type and number of SNF storage systems (vendor and model) used at each site's independent spent fuel storage installation (ISFSI). Loading maps show the specific locations of SNF assemblies in canisters and are used to determine realistic temperatures and does rates and also to determine when a canister may be shipped. During visits, Mr. Maheras examines site conditions, such as on-site transportation features like on-site rail, on-site roads for heavy-haul trucks (HHT), and barge access.
- c. Mr. Maheras was asked what determines the earliest possible shipping year? He explained that they look at each assemblies' removal date, burnup rate, cask type, etc. He was then asked what kind of sites he has visited. So far, Mr. Maheras has gone exclusively to shutdown sites but is hoping to go to operating sites as well. Operating site visits are difficult to schedule around normal NPP activities.
- d. Getting back into his presentation, Mr. Maheras discussed his experiences evaluating near-site transportation infrastructure. He evaluates transportation mode options for the NPP sites by looking at national, regional, or short-line rail access, local roads and highways, and barge access. Site visits typically take place over three days; with the first day at the NPP, the second day examining near-site infrastructure, and the third day often spent meeting with community engagement or advisory panels. External groups, such as tribal and state representatives, participate in the entire site visit.
- e. Mr. Snee asked Mr. Maheras who would be responsible for infrastructure upgrades such as track improvements in order to ship SNF. He answered that for onsite improvements, the licensed utility would pay. For offsite improvement, DOE and/or a partnership with local and state governments would pay. Rodney Pitchford (Illinois) asked if a site evaluation is required for shipments to go forward, especially to a private facility? Mr. Maheras said that DOE and private shippers shall not meet and that a private company can do what they want regarding inspections and shipping. When asked what factors indicate SNF from a particular site is ready for shipment, Mr. Maheras said direct rail access and horizontal dry casks made for transportation are the best indicators.
- f. Mr. Snee thanked Mr. Maheras for his time and announced a half hour break.

#### **4. Carrier Route Selection Process and the Rail Corridor Risk Management System (RCRMS)**

- a. Mr. Snee welcomed attendees back from the break and said the next session will take a look at how radioactive material shipping routes are selected. It is a common misperception that DOE will set the routes that eventual SNF shipments will take. In reality, it is the railways and carriers themselves who set the routes based on DOE and Department of Transportation (DOT) regulations. Other stakeholders then have a chance to evaluate the routes, but the focus of this day was on how initial routes are selected. Mr. Snee then welcomed Patrick Brady, General Director of Hazardous Materials Safety with BNSF Railway, to explain the RCRMS.
- b. Mr. Brady gave his presentation which cannot be shared for proprietary reasons.
- c. When Mr. Brady finished, Mr. Snee called on attendees who wanted to ask questions or make comments.
- d. [49 CFR 172.820\(g\)](#) Rail carrier point of contact on routing issues. Each rail carrier must identify a point of contact (including the name, title, phone number and e-mail address) on routing issues involving the movement of materials covered by this section in its security plan and provide this information to: (1) State and/or regional Fusion Centers that have been established to coordinate with state, local and tribal officials on security issues and which are located within the area encompassed by the rail

carrier's rail system; and (2) State, local, and tribal officials in jurisdictions that may be affected by a rail carrier's routing decisions and who directly contact the railroad to discuss routing decisions.

- i) How do the carriers determine who to provide this information to?
- e. 49 CFR 172.820(c)(2) In performing the analysis required by this paragraph, the rail carrier must seek relevant information from state, local, and tribal officials as appropriate, regarding security risks to high-consequence targets along or in proximity to the route(s) utilized. If a rail carrier is unable to acquire relevant information from state, local, or tribal officials, then it must document that in its analysis. For purposes of this section, a high-consequence target means a property, natural resource, location, area, or other target designated by the Secretary of Homeland Security that is a viable terrorist target of national significance, the attack of which by railroad could result in a catastrophic loss of life, significant damage to national security or defense capabilities, or national economic harm.
  - i) How are carriers working with state, local, and tribal officials in order to meet this regulation?
  - ii) How are carriers determining the appropriate state contact?
- f. Mr. Snee thanked Mr. Brady for his time.

## **5. How the U.S. Department of Energy (DOE) Prepares for Shipment After Route Selection**

- a. Mr. Snee announced that for the last part of the tabletop, the committee would dispense with formal presentations and move into a more open discussion. He invited all DOE guests to answer the following questions and discuss how DOE would prepare for shipments after a route is chosen. First, however, he invited Erica Bickford (DOE Office of Nuclear Energy (NE)) to explain the Stakeholder Tool for Assessing Radioactive Transportation (START).
- b. Ms. Bickford explained START, Mr. Snee thanked her and suggested that the MRMTC and DOE should organize another virtual START training for 2022.
- c. Mr. Snee then invited Ms. Bickford, Mr. Maheras, Ellen Edge (DOE Office of Environmental Management (EM)), and Matt Feldman (PNNL) to answer the following questions. He also invited attendees to interject their own questions and/or follow-ups.
  - i) Does DOE have a high-level or preliminary checklist of tasks to complete after route selection but before shipment? If so, please describe it.
  - ii) How does DOE coordinate with the states after route selection but before shipment?
  - iii) See the [2008 Federal Register Notice \(FRN\) for the proposed Section 180\(c\) policy](#) which states, "DOE will send a letter to the Governor or Tribal leader's office notifying them of their State or Tribe's eligibility to apply for Section 180(c) grants approximately five years before shipments are scheduled through that State or Tribe's jurisdiction."
    - (1) The 2008 FRN has a proposed five-year time commitment for DOE to provide funding to the states. Has DOE made an official determination with regards to how far in advance they will provide 180(c) funding?
    - iv) How does DOE ensure the most up-to-date data is incorporated into START?
    - v) How can a state work with DOE to update data or add additional data layers into START?
    - vi) If states have issues with the proposed route(s) in their state, how can the state and DOE adjudicate the issue?
    - vii) Would DOE be able to work with the carrier(s) to change a route?
- d. Mr. Snee wrapped up this session and thanked the DOE personnel for answering these questions.

## **6. Transportation Infrastructure Discussion**

- a. Mr. Snee announced the tabletop would dive a little deeper into the details of the transportation infrastructure DOE is developing and will develop for SNF shipments. He invited Matt Feldman,

Advisor with PNNL, to give a quick update on the development of the Atlas and Fortis railcars which are being designed to carry SNF containers.

- b. Mr. Feldman gave his updates on these railcars.
- c. Mr. Snee and attendees then moved into a discussion on what transportation infrastructure will be used for shipments and how DOE will acquire the infrastructure; i.e., transportation casks, railcars, HHT, etc.
  - i) How will the transportation infrastructure be moved from site to site?
  - ii) Will casks and cars go back and forth between one origin site and the destination site until all fuel is removed?
  - iii) Will there be multiple sets of transportation infrastructure being used simultaneously?

## **7. State Preparation Activities**

- a. Finally, Mr. Snee announced that the committee's state representatives would consider what activities need to be undertaken in the leadup to shipments.
  - i) How will your states evaluate the proposed route(s)?
  - ii) How will your states inspect shipments, if at all?
  - iii) How will your states distribute 180(c) funds (assuming they are provided)?
  - iv) How will your states organize trainings and emergency management exercises for SNF shipments?

## **8. Adjourn for the Day**

- a. Mr. Snee thanked the presenters for the information they provided and thanked the attendees for their participation and attention. He let everyone know that the slides from the tabletop would be posted on the MRMTC website after the meeting. Finally, he informed attendees about the option group dinner that night and the breakfast and committee meeting the next day.

## **Thursday December 2**

### **1. Welcome and Introductions**

- a. Mr. Snee welcomed everyone to the meeting and introduced himself. He gave a tribal nation and land acknowledgement that can be found below. He mentioned that several people had joined us via Zoom and then went around the room for introductions, including on Zoom. Mr. Snee extended a special welcome for all first-time attendees. He acknowledged yesterday's presenters and participants and thanked them for helping to make the Transportation Tabletop successful. He mentioned that an attendance list was circulating for attendees to review, correct if necessary, and initial. Finally, he noted that these meetings are usually run by two Co-Chairs, but since Tiffany Drake (Missouri) left state service earlier this year, he would be running the meeting as the sole Chair. He announced that we would be welcoming a new junior Co-Chair towards the end of the meeting.
- b. Tribal Nation and Land Acknowledgement: "This meeting is taking place on the traditional unceded homelands of the Council of the Three Fires: the Ojibwe, Odawa, and Potawatomi Nations. Many other tribes such as the Miami, Ho-Chunk, Menominee, Sac, and Fox also called this area home. The region has long been a center for Indigenous people to gather, trade, and maintain kinship ties. Today, one of the largest urban American Indian communities in the United States resides in Chicago. Members of this community continue to contribute to the life of this city and to celebrate their heritage, practice traditions, and care for the land and waterways. We recognize Chicago's indigenous communities with many who live here now, those who were forcibly removed from their homelands, and the ancestors of this land. In offering this land acknowledgement, we affirm indigenous sovereignty and the cultural history of the indigenous people of this land in the City of Chicago.

## 2. Orano TN Transportation Presentation

- a. Mr. Snee invited Mike Valenzano to give a presentation on the “Vermont Yankee RadWaste Canister (RWC) Transport” campaign. Mr. Valenzano was unable to join the meeting in person and gave his presentation virtually via Zoom.
- b. Mr. Valenzano’s presentation was divided into two parts; RWC Loading, Transport & Disposal, and Lessons Learned. Orano’s mission is to support NorthStar’s nuclear decommissioning with the segmentation, packaging for disposal and transportation of Vermont Yankee’s (VY) reactor vessel internal structures and the reactor vessel itself. The scope of Orano’s work does not involve any packaging or transportation of SNF. The SNF assemblies have already been removed from the reactor and are currently in dry storage on site at VY. The reactor vessel is laser cut into smaller segments and often placed together in baskets. The reactor vessel segments are loaded into the RWC which is within the transfer cask in the spent fuel pool (SFP). The RWC lid is placed and the transfer cask is removed from the SFP for evacuation and drying. Mr. Valenzano then showed a video of the RWC closure and removal from the SFP. The RWC is then carefully tipped over and transferred to the horizontal transfer system where the RWC is loaded into the transportation cask. Mr. Valenzano then explained that five RWC shipments had already been delivered to Waste Control Specialists (WCS) in Andrews, Texas, and that the sixth RWC was scheduled to arrive this week. The seventh and final RWC shipment, which will be a Category 1 shipment, will be delivered in the first quarter of 2022. He then shared a video and pictures depicting the RWC’s journey from Vermont to Texas via rail and then its final disposal at WCS.
- c. Mr. Valenzano then described the lessons learned from the nearly completed shipping campaign. First, the challenges included ambiguity in the U.S. Department of Transportation’s (DOE) hazardous materials regulations. VY (the licensee) planned to implement 49 CFR 172.514(c)(3) *Exceptions* to put placards on two opposite sides rather than radioactive labels. The idea was that for White-I or Yellow-II shipments that do not require placards, the placards would be better for hazard communication. The Federal Railroad Administration (FRA) disagreed with this approach and suggested that Type B radioactive material packages cannot be considered bulk packages. Mr. Valenzano said that it’s not clear how the exception would be communicated on paperwork and inspectors would not understand any rationale for “missing” labels. Another challenge was data loss in the electronic bill of lading (BOL) system. Despite entering information directly in New England Central Railroad’s (NECR) eBOL system in order to generate the rail BOL, Orano found that the information that was transmitted to CSX railroad was inaccurate and incomplete. Another challenge was unplanned routing changes made by railroads based on schedule and operations optimization. These changes affected and changed the routes through Missouri, Arkansas, and Texas. Orano continues to monitor closely and ensure, to the best of their ability, proper routing prior to Category 1 shipments. Additionally, railroad systems and sensors have identified faults on railcars requiring minor maintenance. It is good to identify necessary maintenance to avoid larger problems, but this does delay delivery. The final challenge was weather and other network disruptions that have impacted the shipment schedule. Finally, Mr. Valenzano outlined the successes of the campaign. First, there were no delays due to transportation events or incidents. The FRA had been very open and helpful in ensuring that shipments are prepared and executed in accordance with regulatory requirements. Feedback on the GPS tracking system has been positive and WCS performed unloading without difficulty.
- d. Mr. Snee thanked Mr. Valenzano for his presentation and moved on to the next session.
- e. [Click here for Mr. Valenzano’s presentation.](#)

## 3. Autonomous Airborne Radiation Monitoring System

- a. Mr. Snee invited John Filby to give a presentation on the “Kromek Autonomous Airborne Radiation Monitoring System.”
- b. Kromek provides radiological and biological detection solutions around the world in four markets; nuclear detection, medical imaging, security screening, and biological threat detection. It is a publicly

traded company and a U.S. small business entity with main manufacturing sites in the U.S. and United Kingdom (U.K.). Kromek has a two-pronged business model by selling both Kromek branded end-user products and original equipment manufacturer (OEM) subsystems. The company is vertically integrated and owns all steps in the manufacturing process, including research & development (R&D), design, and production. Its headquarters are in Durham, U.K., with a U.S. branch in Pennsylvania and two R&D centers in California and West Yorkshire, U.K. Kromek began in 2003 as an offshoot of Durham University with more than \$100 million in technology development. The company holds more than 275 patents and has about 120 employees including more than 15 with PhDs. Kromek's products include a mixture of commercial off-the-shelf detectors and custom designed applications based on customer interest.

- c. Mr. Filby's presentation focused on Kromek's Autonomous Airborne Radiation Monitoring (AARM) System, which is an advanced gamma-spectroscopy based unmanned aerial vehicle (UAV) mapping system. The AARM integrates numerous radiation and positional sensors powered by an intelligent internal battery management system and secure data transmission functionality permits near real-time observation of radiation data. The AARM came about through a collaboration between Kromek and Imitec Ltd. And was funded by U.K. company Sellafield in 2013. The system was immediately deployed to Fukushima upon completion. Currently in its fourth commercial iteration, the AARM was the first UAV radiation detection technology used on a U.K. nuclear site. When the AARM was deployed to the Fukushima Exclusion Zone, routine monitoring of the interim waste storage site detected radiation leakage following a trail of water runoff. Mr. Filby then showed a video displaying the AARM's mapping capability, using the example of a radiation heat map overlay on ArcGIS 3D Light Detection and Ranging (LIDAR) scan of the Chernobyl waste storage site. The AARM payload has the following optional features; real-time data display with several data screens, single-push button for turning the AARM on and off and switching between display screens, a battery with two and a half hours session time on a single charge and up to 60 days standby, auto-shutdown on low power, and on-board data storage with additional USB port for secondary data recording. Some of the things that are measured and transmitted by the AARM include temperature, altitude above ground (m), GNSS data (latitude/longitude, altitude, date/time, # of satellites), gamma spectral data, and counts per second (CPS) gamma. The AARM can also do real time mapping on an iOS app. AARMs have been deployed for various roles, including routine mapping of nuclear facilities, emergency management agency response, chemical, biological, radiological, nuclear, and high yield explosives (CBRNE) team area exploration or adjudication, hazardous site investigation, limited access site investigation, environmental remediation, and in the mining industry. In summary, the AARM is a highly sensitive and accurate detector technology configured by application, it can perform unmanned aerial radiation monitoring, provide real time transmission, has flexible communications/data hosting options, is small form and lightweight, has about a two-and-a-half-hour battery life, and is useful in multiple roles, both routine and in response to an incident. The State of Michigan has partnered with Kromek to develop its own UAV monitoring system.
- d. Mr. Snee thanked Mr. Filby for his presentation and moved on to the next session.
- e. [Click here for Mr. Filby's presentation.](#)

#### **4. DOE Program Reports and Committee Discussion**

- a. Mr. Snee reminded the members and attendees that the committee exists to help the states engage with DOE on shipments. Funding for the committee and its activities comes from DOE through cooperative agreements with the Council of State Governments (CSG) Midwest, who staffs the committee. Mr. Snee expressed appreciation for the ongoing support that the region receives from DOE and noted that representatives from the Office of Environmental Management and Office of Nuclear Energy were in attendance, and the Carlsbad Field Office was joining via Zoom.
- b. Carlsbad Field Office (CBFO) and Waste Isolation Pilot Plant (WIPP)
  - i. Mr. Snee introduced Bobby St. John and James Mason from CBFO and thanked them for joining us virtually and turned the floor over to them to speak about WIPP.

- ii. WIPP opened in 1999 and has now operated for more than 20 years. It has enabled clean up of 22 legacy transuranic (TRU) waste sites throughout the U.S. and remains a cornerstone of DOE's ongoing cleanup efforts. Recapitalization and critical infrastructure upgrades are currently underway. The WIPP repository is 2,150 feet deep with several disposal panels, four vertical shafts, ventilation, and an experimental area on the north end. In FY21, WIPP received 199 shipments for 224,304 total loaded shipping miles. Other accomplishments of that year include the completion of mining in panel 8, completing the walls of the salt reduction building, balancing the 700-C fan, upgrading the Central Monitoring Room, and receiving approval to resume work on underground shaft #5. Over the course of WIPP's history, over 13,000 shipments have been received, which equates to over 15.5 million safe loaded miles traveled. The site receives an average of 5 – 7 shipments per week with consistent shipments from Los Alamos National Laboratory (LANL), Idaho National Laboratory (INL), and Savannah River Site (SRS). Mining of panel 8 was completed in September and outfitting will be completed by February 2022. WIPP expects panel 8's certification from the New Mexico Environment Department in April 2022, at which point it will be ready for emplacement. Mr. St. John then went into further detail on other mining progress in the underground, the restart of the 700-C fan, the salt reduction building, the utility shaft, WIPP's electric vehicles, and other general plant projects like fire protection, electrical upgrades, air line replacements, new compressors, etc. One significant new project at WIPP is the Safety Significant Confinement Ventilation System (SSCVS). The SSCVS will increase air volume flow throughout the underground, allowing for improved working conditions and increased worker comfort. The project is expected to be operational in 2025. A major component of the SSCVS project is building a new filter building. Concrete placements for the building was completed in August 2021 and 50 of 153 concrete wall placements were cast by October. WIPP has received all 22 HEPA filter units that will be installed in the filter building.
  - iii. Mr. Snee thanked Mr. St. John for the presentation and moved on to the next session.
  - iv. [Click here for Mr. St. John's presentation.](#)
- c. Office of Environmental Management (EM)
- i. Mr. Snee introduced Ellen Edge from the DOE Office of Packaging and Transportation (OPT) and asked her to provide an update on DOE-EM-related activities.
  - ii. Notes were not taken during Ms. Edge's update and there was no PowerPoint. Our apologies for the lack of information here.
  - iii. Mr. Snee thanked Ms. Edge for the update and moved on the next session.
- d. Office of Nuclear Energy (NE)
- i. Mr. Snee introduced Erica Bickford from the DOE Office of Integrated Waste Management (IWM) and asked her to provide an update on DOE-NE-related activities.
  - ii. Ms. Bickford provided an update on the leadership and staffing within DOE-NE. Since the last meeting of the MRMTC, Dr. Kathryn (Katy) Huff became Principal Deputy Assistant Secretary for DOE-NE in May 2021. She was previously a professor at the University of Illinois at Urbana-Champaign. Dr. Kimberly (Kim) Petry became Acting Deputy assistant Secretary for Spent Fuel & Waste Disposition in July 2021. She also remains Acting Office Director for DOE-IWM. Jorge Narvaez is a nuclear engineer who joined IWM in October and will be supporting IWM work related to interim storage design and program integration. Juan Uribe is a civil engineer who previously worked at the U.S. Nuclear Regulatory Commission (NRC) before joining IWM in early December where he will be supporting consent-based siting activities. Natalia Saraeva, currently with PNNL, will be detailed to DOE headquarters in early 2022 to support IWM's consent-based siting and interim storage projects. IWM is also planning to bring in more staff later this year to backfill positions that are vacant due to retirements and

promotions, and to add social science expertise to support consent-based siting related communications and outreach activities. The eighth revision of the Spent Nuclear Fuel and Reprocessing Waste Inventory report was expected to be released in late Fall 2021. This report gives actual or estimated quantitative values for current and forecasted inventories of commercial SNF and includes state summary data. Ms. Bickford provided an update on the FY22 draft House and Senate appropriations bills which would include \$27.5 million for nuclear waste disposal (including interim storage) and \$18 million for the IWM office. Next, Ms. Bickford described the FY22 transportation program plans including railcar development, security, SNF transportation knowledge management, and communications and analysis. Then, she described the Section 180(c) Historical Summary Report and the Draft Railcar Safety Inspection Protocol. Finally, the DOE-NE's consent-based siting/interim storage initiative was discussed including the upcoming request for information (RFI) that will seek public input on how to site a federal SNF interim storage site.

- iii. Mr. Snee thanked Ms. Bickford for the presentation and moved on to the next session.
- iv. [Click here for Ms. Bickford's presentation.](#)

e. National Transportation Stakeholders Forum (NTSF)-Related Reports

- i. Mr. Snee reminded attendees that the Midwest is very active on the NTSF, which is DOE's primary mechanism for engaging and communicating with states and Tribes about shipments of radioactive waste and materials.
- ii. *Planning Committee*: Mr. Snee reported that in 2021, the NTSF Planning Committee held a five-part virtual event series in place of a normal in-person meeting. The titles of these webinars were "[International Nuclear Material Shipment Coordination – Perspective on Campaigns from Canada to the Savannah River Site](#)," "[Naval Nuclear Propulsion Program](#)," "[Vermont Yankee RadWaste Canister Shipment Campaign Update](#)," "[Day in the Life of a WIPP Shipment](#)," and "[Nuclear Power Plant Site Evaluations Overview and Status Report](#)." These webinars are available on the new [NTSF website](#), which Mitch Arvidson (CSG Midwest) covered below. He reported that the Planning Committee is now focused on preparations for the 2022 Annual Meeting of the NTSF, which will be hosted by DOE and the Northeast High-Level Radioactive Waste Transportation Task Force on June 6 – 9 in Philadelphia, PA. The Planning Committee has adopted a new Management Plan that seeks to streamline the hosting duties for each of the SRGs and the Tribal Radioactive Materials Transportation Committee (TRMTC) when it is their turn to host.
- iii. *Wiki/Web Site Revision*: Mr. Snee asked Mr. Arvidson to give a report on the NTSF wiki/web site revision. He reported that a work group of Ms. Bickford, Ms. Edge, Tansey Moore (National Conference of State Legislators (NCSL)), and himself was formed to look for other site hosting options after Wikidot, the company that previously hosted the NTSF's wiki site, unexpectedly changed their subscription levels and no longer allowed people to be added to the wiki site. The work group decided to go with Google Sites and has mostly finished populating the site's content. DOE approved the site, and it can be found at <https://www.ntsfi.info/>. Mr. Arvidson then briefly walked attendees through the website on the projector.
- iv. *SNF Rail/Routing Ad Hoc Working Group (AHWG)*: Mr. Snee then asked Waylon Sanford (Michigan) to give a report on the SNF Rail/Routing AHWG. Mr. Sanford said that the purpose of the AHWG is three-fold. First, to facilitate dialogue between federal staff from DOE, the FRA, Tribes and states, and other transportation stakeholders. Second, to develop a common understanding of how future rail shipments of SNF will operate. Third, to identify outstanding issues or questions to resolve in advance of commencing rail-based SNF shipping campaigns. The goal of the AHWG is to identify key issues relating to rail transport from the NTSF community, address those issues and document work done through white papers or summary reports and make that work available to the NTSF community. He reported that the



AHWG is currently reviewing the FRA's revised Safety Compliance Oversight Plan (SCOP). The primary purpose of the SCOP is to address concerns regarding rail shipment of SNF/HLW in association with various shipping campaigns. The plan will emphasize and coordinate actions between the FRA, other Federal, state, local and tribal organizations and rail carriers, in order to promote the safe and secure rail transport of these shipments on the nation's railroads. A secondary purpose of the SCOP is to establish a comprehensive task plan that can be used as a planning document for coordination of activities associated with rail shipments of SNF, HLW, and foreign research reactor fuel and national security shipments transported in accordance with 49 CFR 173.7(b) as applicable. Mr. Sanford reported that the group is still awaiting a copy of the newest SCOP update and will not meet again until it is released. The group is also working on the proposed SNF Railcar Inspection Protocol. He said that the group will hear all about the protocol and the latest changes from Mr. Maheras later in the day, so he would not get into the details. He let the committee know that states and SRGs like the MRMTC have until February 1 to make comments on the current draft. Mr. Sanford said that the committee should consider if they want to make comments, and if they should do so as individual states or as a collective committee. Brian Vercruyse (Illinois), Jamie Reyes (Nebraska), Kelly Horn (Illinois), Mr. Arvidson, Edward Engle (Iowa), Mr. Sanford, and Tom Forbes (Ohio) all represent the Midwest on the AHWG. Ms. Bickford leads the AHWG for DOE.

- v. Mr. Snee thanked Mr. Arvidson and Mr. Sanford for their reports and called for a lunch break until 1 PM.

## 5. Lunch

## 6. Regional Roundtable

- a. Mr. Snee called the meeting back to order, noted that there was 60 minutes for the state and Tribes to give their reports, so he asked everyone to be brief. He reminded them to focus on 1) transportation, 2) closure of nuclear power plants, 3) return to work/post-COVID activities, and 4) anything else they think would be of interest to the committee.
- b. Illinois: Mr. Pitchford delivered Illinois' report. In the last year, Illinois experienced 165 low-level waste (LLW) shipments and inspected 43 highway route-controlled quantity (HRCQ) shipments. This was a big drop off from previous years. There were also five SNF shipments, zero WIPP shipments, and 26 Category 1 shipments. During this time period there were zero violations. Mr. Pitchford reported that there was some worry that the Byron and Dresden nuclear power plants would shut down, but Illinois state legislation bailed them out. Finally, Zion Nuclear Power Plant's large decommissioning activities have been completed.
- c. Indiana: Sarah Chaney delivered Indiana's report. She reported that Indiana had filed paperwork with the NRC to become an Agreement State, allowing it to assume regulatory authority over industrial, medical, and academic uses of radioactive materials and LLW.
- d. Iowa: Christopher Boswell delivered Iowa's report. He reported that the state is planning to do a large training event with the U.S. Department of Homeland Security (DHS).
- e. Kansas: Swapan Saha delivered Kansas' report. The state has performed several trainings recently and experience just a few LLW shipments.
- f. Michigan: Greg Gothard and Mr. Sanford delivered Michigan's report. The state's radiation emergency preparedness (REP) program staff have gone fully remote. The closure of the Palisades Nuclear Power Plant is moving forward. Holtec is attempting to acquire both Palisades and the ISFSI at Big Rock Point (BRP), possibly with the plan to move SNF from BRP to store at Palisades. Mr. Gothard's agency is partnering with Ohio and Indiana to develop drone training exercises. Finally, some of Michigan's Congressional delegation is pushing back against the possible siting of Canada's Deep Geologic Repository (DGR) on the shores of Lake Huron.

- g. Missouri: Ryan Seabaugh delivered Missouri's report. He stated that Missouri has experienced a lot fewer radioactive materials shipments lately. He also updated the committee on the Naval Nuclear Propulsion Program (NNPP) Demonstration Exercise that will take place sometime in 2022 in Moberly, MO.
- h. North Dakota: David Stradinger delivered North Dakota's report. He said that COVID-19 didn't really affect his agency too much and they were back working in the office quickly. He reported that the state had experienced a few HRCQ shipments.
- i. Ohio: Mr. Snee and Tad Rumas delivered Ohio's report. They updated the committee on the public corruption trial revolving around Ohio House Bill 6. They also reported on a couple of shipments to the Ohio State University research reactor as well as some NNPP shipments.
- j. Wisconsin: Paul Schmidt delivered Wisconsin's report. In the last year, the state has experienced a limited number of HRCQ shipments. Mr. Schmidt also updated the committee on the decommissioning of the Kewaunee Nuclear Power Plant. EnergySolutions is in charge of the decommissioning but NorthStar argued that their bid to buy and decommission the plant was not properly considered. the Wisconsin Public Service Commission (WPSC) will make the final call on which company gets to decommission Kewaunee.
- k. Oneida Nation: Daniel King delivered the Oneida Nation's report.
- l. Pahrump Paiute: Richard Arnold delivered the Pahrump Paiute Tribes' report.
- m. Prairie Island Indian Community: Heather Westra delivered the Prairie Island Indian Community's report.
- n. Mr. Snee thanked everyone for their updates and moved on to the next session.

## **7. Cooperative Agreement Group Reports**

- a. Mr. Snee reminded the committee that, including the Midwest, there are five groups that have cooperative agreements with DOE. He invited each person representing the regional and tribal cooperative agreement groups to provide an update on the groups' activities. Notes were not taken during these updates so detailed summaries cannot be provided.
- b. TRMTC: Mr. Arnold delivered the TRMTC report.
- c. CSG Eastern Regional Conference: Uldis Vanags delivered the CSG Eastern Regional Conference/Northeast High-Level Radioactive Waste Transportation Task Force report.
- d. Southern States Energy Board (SSEB): Christopher Wells delivered the SSEB report.
- e. Western Interstate Energy Board (WIEB): Jeremy Fancher delivered the WIEB report remotely.
- f. Mr. Snee thanked everyone for their updates and moved on to the next session.

## **8. Bedford Park Rail Car Fire Presentation**

- a. Mr. Snee invited Jeff Moore (FRA) to give a presentation on the FRA's final investigation regarding the 2020 radioactive rail car fire that happened in Bedford Park, IL, just 15 miles southwest of Chicago and this meeting's location.
- b. Mr. Moore stated that the FRA found out about the rail car fire when a National Response Center (NRC) report was forwarded to the FRA on June 4, 2020. The NRC described the incident as a "release of an unknown amount of radiation into the atmosphere from an unknown amount of radiative rods on a rail car that caught fire inside the Bedford Park rail yard. The fire is assumed to be started by friction of the material. The fire has been put out at this time, and is being monitored in case of reignition." The FRA's immediate response was to call the Belt Railway Company's (BRC) official railroad policeman, who directed the FRA to the on-site response team of the Bedford Park Fire & Hazmat Team and the BRC's emergency contractor. Emergency responders asked the FRA how to put the fire out because they were initially using water but that worked temporarily and the fire reignited

after a few hours and climbed up to 700 degrees Fahrenheit. The gondola's shipping documents were unclear and conversations with the shipper did not answer whether the car could retain heat and reignite like this. The shipper's specialized response contractor tried to smother the fire with liquid nitrogen but resorted to smothering the fire with sand when that didn't work. After the incident, the original destination rejected the load, and it was decided that the contents would be transferred into 20 ft. roll-off containers for highway transportation. The FRA had questions about the non-hazmat material in the car, especially the listing of a large quantity of "Zirc Tubes." The shipper insisted that these tubes were Zircalloy and not Zirconium. Zirconium scrap is a Hazardous Class 4.2 spontaneously combustible material. During transloading, FRA found large metal machinery parts in the gondola, including metal shop tables and drill presses. There were also large pieces of wood and other combustible material with the Zirc rods. The rods were dispersed throughout the gondola in no certain arrangement, were of various lengths, and raggedly cut. The NRC, the Pipeline & Hazardous Materials Safety Administration (PHMSA), Illinois Commerce Commission (ICC), and the Illinois Emergency Management Agency (IEMA) Division of Nuclear Safety assisted the FRA in the investigation. The FRA interviewed the shipper on September 2, 2020, during which the shipper insisted that the rods were Zircalloy and not hazardous. The FRA requested any documents, shipping papers, invoices, etc. that would indicate how the rods were classified as Zircalloy and not Zirc scrap. No documents were provided. At this point the FRA shared an NRC document with the shipper dated August 31, 2010. The document showed an import license to ship radiological materials, including Zirconium and Zirconium scrap from Mississauga Metals and Alloys (MM&A) from Canada to EnergySolutions in Clive, UT, with a midpoint stop at the shipper's location in Wampum, PA. 20 days later, the shipper found a bill of lading for a truck delivery of Zirconium scrap and other metals dated 2010 from MM&A to their facility. Safety data sheets for Zirconium rods indicate this material, especially "cut" sections, can be pyrophoric and can be ignited. The shipper did not provide any special handling instructions with the load. The sheets also indicated not to use water to extinguish a Zirconium fire as it will create an oxygen rich environment and fuel the fire. The FRA's investigation concluded that the shipper had the information to know that Zirconium rods were being loaded into the gondola, that they were loaded improperly, allowing the rods to interact with one another and other metal objects and that this metal-to-metal contact created filings that sparked and ignited the combustible dunnage (wood) in the car. The FRA wrote two recommendations for civil penalties against the shipper and recommended the development of packaging standards for such metals.

- c. Mr. Snee thanked Mr. Moore for his presentation and moved on to the next session.
- d. [Click here for Mr. Moore's presentation.](#)

## 9. Railcar Safety Inspection Protocol Update

- a. Mr. Snee invited Mr. Maheras to give a presentation on the status of the Railcar Safety Inspection Protocol.
- b. Mr. Maheras stated that the objective of the Draft Railcar Safety Inspection Protocol is to develop a protocol that would be conducted by upstream inspectors and shared with downstream jurisdictions. Rail carriers (railroads), the FRA, and state rail inspectors certified by FRA all currently conduct inspections. The draft protocol originated as a rail analogy to the Commercial Vehicle Safety Alliance (CVSA) Level VI truck inspection for HRCQ shipments. A previous effort to create a rail protocol was undertaken by the states in 2002 but stopped in 2010. Mr. Maheras presented a representative train that would consist of the Atlas railcar, buffer railcars, and a rail escort vehicle. He has created a simplified concept of operations (direct rail, HHT to rail, barge to rail, etc.) to provide a framework for development of the draft inspection protocol. Some of the simplified destination site activities include placing unloaded transportation casks onto cask-carrying railcars, inspecting trains before departing for origin site, and pulling cars with serious defects out of service and sending them for repair. Some of the simplified origin site activities include loading transportation casks, assembling buffer cars, cask-carrying cars and rail escort vehicle into a train, and fixing minor defects before departure. The protocol integrates inspections required by several entities, including the FRA's railcar inspection

regulations, PHMSA's hazardous materials regulations, the Association of American Railroad's (AAR) Standard S-2043 railcar inspection checklists, and the AAR's interchange inspection requirements. Ideally, the protocol would allow consistently formatted inspection reports to be shared with states and Tribes along rail transportation routes. Inspectors under contract to DOE would conduct extra-regulatory and specifically structured inspections and would not replace other inspectors. Mr. Maheras then brought up some additional items that will need to be discussed amongst the NTSF SNF Rail/ Routing AHWG; including providing AAR Standard S-2043 information through the TRANSCOM system, the feasibility of providing a data feed containing radiation dose rate measurements, the role of the NRC, out-of-service criteria, protocol for further inspections or stopping a train, en route inspections, and the development of inspection forms.

- c. Mr. Rumas asked that when a CVSA Level VI point-of-origin inspection determines a truck to be out of service, they will hold the shipment. How will that work for rail? Mr. Brady answered that there are currently FRA regulations that will withhold the train from shipping. Mr. Valenzano asked how it is envisioned to have a regulatory driver, given that DOT regulations give force to Level VI inspectors. Mr. Maheras answered that the draft protocol wouldn't impose any new requirements, and that it just coalesces already existing regulations. Ms. Bickford answered that DOE would include those procedures in its contracts with shippers/carriers. Mr. Arvidson then informed attendees that he had distributed the newest draft to them via email.
- d. Mr. Snee thanked Mr. Maheras for his presentation and moved on to the next session.
- e. [Click here for Mr. Maheras' presentation.](#)

#### 10. Committee Business Session

- a. Table Resetting: Mr. Snee thanked everyone for their participation the last two days and let them know that the MRMTC Fall 2021 Meeting would be finishing with the Committee Business Session. He let attendees know that all of the presentation they had seen during the meeting would be posted to the [MRMTC website](#). He also let committee members know that they should expect a reimbursement form to be sent to them by Mr. Arvidson next week and to save any travel-related receipts they have from the meeting.
- b. Chair's Report: Mr. Snee gave his Chair's Report, which is when the committee leaders reflect on the current status of the MRMTC and interesting projects. He commented on his impressions of the first in-person meeting in two years. He encouraged state members to seek ways to increase their outreach to Tribes in their states using materials created by the MRMTC Regional Tribal Engagement Work Group. Finally, Mr. Snee encouraged people to seek out training and learning opportunities and to reach out to Mr. Arvidson to see if CSG Midwest could cover travel expenses.
- c. Project Update: Mr. Arvidson provided the project update and discussed the status of the committee's cooperative agreements and funding. He talked about the project's staffing and the recent appointments of Ms. Chaney, Mr. Seabaugh, Mr. Stradinger, and Paul Gazdik (Wisconsin). Finally, he informed attendees about the contents of DOE-OPT's Prospective Shipment Reports (PSR) and DOE-CBFO's Semi-Annual WIPP Notification to the States and the WIPP Eight Week Rolling Schedule Shipment Summary.
- d. Planning Guide Update: Mr. Arvidson gave the MRMTC *Planning Guide* Review Work Group update. This work group is formed every odd-numbered year, with the purpose of MRMTC members assisting staff to review and revise the "[Part II. Recommended Practices](#)" section of the [Planning Guide for Shipments of Radioactive Materials through the Midwestern States](#). Members of this year's work group were Mr. Pitchford, Mr. Saha, Mr. Gothard, and Mr. Schmidt. The MRMTC as a whole had already approved the work group's suggested changes during the virtual MRMTC Spring 2021 Meeting in June. However, there were still some changes that needed to be made after that meeting. For example, Mr. Arvidson changed the URL links throughout the document to reflect the new MRMTC pages on the new CSG Midwest website. A new [appendix](#) was added listing federal statutes and regulations that are referenced in the *Planning Guide*. Finally, the language of the document was

softened to reflect that the guide should be useful for all shippers and that many non-Federal government-led shipping campaigns are not beholden to the same regulations as government shipments. After these changes were made, the *Planning Guide* was sent to DOE for final approval, which was granted. The 2021 edition is now published and available online.

- e. Regional Tribal Engagement Work Group: Mr. Snee invited Ms. Chaney to give an update on the MRMTC Regional Tribal Engagement Work Group. Ms. Chaney stated that the work group's purpose is to help MRMTC representatives' outreach to Tribes in their states. This is done through collaboration with TRMTC, Midwestern tribal representatives, federal agencies, and members of the MRMTC. There is great interest amongst the region's states in sharing information with, and collaborating with, Tribes regarding transportation of SNF and other radioactive materials. By working through the regional committee, it may be possible to overcome barriers that states have encountered in the past. Since the last meeting of the MRMTC in June, the work group met via Zoom on July 22 and October 25. As established in the group's 2021 work plan, the group undertook and finished three projects this year. First, it updated and expanded "[Appendix E: Tribal Information](#)" in the *Planning Guide*. To do this, the group reached out to the Tribes currently listed in the appendix. Several Tribes responded and provided updated points of contact for environmental or emergency response directors. Those updates had been captured in the current online version. Then, the group developed an information [brochure encouraging regional Tribes to opt-in to the NRC's advance notification program](#). This brochure tells readers what advance notification is, how to opt-in, the contents of the notifications, and which Tribes are already participating. Finally, the work group developed a guidance document for MRMTC members on how to establish relationships with Tribes bordering their jurisdictions. First, it offers an explanation for why members should establish these relationships and then provides 13 steps on how to establish these relationships. It is hoped that together, both documents will encourage committee members to undertake some outreach themselves with useful information for Tribes already in hand. Ms. Chaney noted that the group's existence helped lead to the hiring and establishment of an Indiana Tribal Liaison. Members of the group are Allan Barker (NRC), Michael Bradley (Pokagon Band of Potawatomi Nation), Ms. Chaney, Scott Doig (U.S. Bureau of Indian Affairs (BIA)), Mr. Gothard, Tim Grant (Omaha Tribe of Nebraska), Aaron Kallunki (Minnesota), Mr. King, Ms. Moore, and Ms. Westra.
- f. Member Survey: Mr. Snee asked Mr. Arvidson to summarize the results of the 2021 MRMTC Member Survey. This survey is done for the purpose of identifying what aspects of the CSG Midwestern Radioactive Materials Transportation Project are working well, what can be improved, and what tasks the members view as priorities for the states and the staff. The results were also meant to identify projects the committee might undertake under CSG Midwest's cooperative agreements with DOE. Only 10 out of 23 committee members and alternates responded to the survey. Members were first asked to rate their overall satisfaction with CSG Midwest staff's service to them and their states. All the responses said they were "very satisfied" or "satisfied" with the service. Then, members were asked to rate several aspects of the CSG Midwest staff's service. All of the responses rated the service as either "great" or "good," with the exception of a few "no opinion" responses. When asked what one thing the staff could do better, one respondent had the suggestion to provide more technical topics to meeting agendas. Members then rated project priorities in two categories; Meetings, Trainings, and Exercises, and Information and Communications. When asked about other project ideas for CSG Midwest to undertake, all 10 respondents skipped answering the question. Mr. Arvidson then tried to determine if committee members are not aware of what kind of projects CSG Midwest can undertake, if they think the MRMTC and CSG Midwest are doing enough as is, or if committee members do not have any extra availability to take part in more projects or work groups. The survey then asked members about the biggest benefit they derive or hope to derive from the committee. Answers included "access to group knowledge of transportation issues and solutions" and "the ability to stay abreast of, and provide a voice for my state in the decisions being made on, current topics and issues related to the transport of radioactive materials through my state and region. Finally, most respondents said they were participating as much as they want or need to, given their states' circumstances.

- g. Election of Co-Chair: Mr. Snee reminded MRMTC members that the committee is usually led by two co-chairs who serve staggered two-year terms. Ms. Drake would have been the Senior Co-Chair for this meeting and her term would have ended at the end of December. At this time, Mr. Snee said the committee would elect a new co-chair whose service would begin immediately and finish at the end of 2023. He reminded members that, under the committee's rules, only appointees or designated alternates can serve as co-chair. Additionally, only appointees and designated alternates can nominate and vote on candidates. Seeking nominations, Mr. Gothard nominated Mr. Pitchford. Mr. Snee seconded the nomination. Mr. Pitchford said he would be willing and able to serve if elected. By unanimous voice vote, Mr. Pitchford was elected as MRMTC Co-Chair for 2022-2023.
- h. Committee Work Group Assignments and Plans: Mr. Snee then asked for volunteers to serve on the MRMTC and NTSF groups that would be working moving forward. Mr. Saha and Mr. Seabaugh volunteered for the NTSF Section 180(c) AHWG. Mr. Pitchford and Mr. Snee volunteered for the MRMTC Consent-Based Siting RFI Work Group. Mr. Gothard, Mr. Rumas, and Mr. Boswell volunteered for the NTSF Transportation Emergency Preparedness Program (TEPP) AHWG.
- i. Spring 2022 Meeting and NTSF 2022 Discussion: Mr. Arvidson reminded the committee that they will be meeting in June 2022, in conjunction with the Annual NTSF Meeting. The MRMTC will have about four hours to meet, and Mr. Arvidson asked for topic ideas for both the MRMTC and NTSF Meetings. It was suggested that the NTSF bring Mr. Filby back for another presentation on UAVs/drones. It was also suggested that there be a presentation on DOE-NE shutdown and operating site visits.

#### **11. Wrap-Up**

- a. Review Action Items: Mr. Arvidson reviewed the action items for the committee going forward. Those action items are captured below.
- b. Closing Remarks: Mr. Snee thanked all the attendees for coming and adjourned the meeting.

#### **12. Adjourn**

## ATTENDEES

### Committee Members:

Christopher Boswell, Iowa  
Sarah Chaney, Indiana  
Greg Gothard, Michigan  
Rodney Pitchford, Illinois  
Swapan Saha, Kansas  
Waylon Sanford, Michigan  
Paul Schmidt, Wisconsin  
Rep. Mark Schreiber, Kansas  
Ryan Seabaugh, Missouri  
Michael Snee, Ohio  
David Stradinger, North Dakota

### Tribal Representatives:

Richard Arnold, Tribal Radioactive Materials  
Transportation Committee (TRMTC)  
Daniel King, Oneida Nation  
Heather Westra, Prairie Island Indian  
Community

### Speakers:

Erica Bickford, U.S. Department of Energy  
Office of Nuclear Energy (DOE-NE)  
Patrick Brady, Burlington Northern and Santa  
Fe (BNSF) Railway  
Ellen Edge, DOE Office of Environmental  
Management (EM)  
Matt Feldman, Pacific Northwest national  
Laboratory (PNNL)  
John Filby, Kromek  
Steve Maheras, PNNL  
Jeffrey Moore, Federal Railroad  
Administration (FRA)  
Cyrus Nezhad, DOE Office of General Counsel  
Bobby St. John, Waste Isolation Pilot Plant  
(WIPP)  
Mike Valenzano, Orano TN Americas

### Other State Attendees:

Veena Gubbi, New Jersey Department of  
Environmental Protection  
Earl Imler, Nebraska Emergency Management  
Agency  
Tad Rumas, Public Utilities Commission of  
Ohio  
Melanie Snyder, Nevada Agency for Nuclear  
Projects

### Other Attendees:

Mitch Arvidson, Council of State  
Governments (CSG) Midwest  
Jenny Chidlow, CSG Midwest  
Andy Elkins, American Association of  
Railroads (AAR)  
Jeremy Fancher, Western Interstate Energy  
Board (WIEB)  
Robert Fronczak, AAR  
Elizabeth Helvey, North Wind Site Services  
Cheryl Laws, Orano TN Americas  
Matthew Learn, U.S. Nuclear Regulatory  
Commission (NRC)  
James Mason, DOE Carlsbad Field Office  
(CBFO)/WIPP  
Lauren Rodman, North Wind Site Services  
Kathy Treland, CSG Midwest  
Uldis Vanags, CSG Eastern Regional  
Conference  
Christopher Wells, Southern States Energy  
Board (SSEB)

## ACTION ITEMS

### States and Tribes:

- Mike Snee and Rodney Pitchford will serve as Midwestern Radioactive Materials Transportation Committee (MRMTC) Co-Chairs
- Greg Gothard will serve as Immediate Past Chair
- Kelly Horn and Rep. Mark Schreiber will serve as Committee Liaisons
- Allan Barker, Michael Bradley, Sarah Chaney, Scott Doig, Greg Gothard, Tim Grant, Aaron Kallunki, Dan King, Tansey Moore, Lauren Rodman, and Heather Westra will serve on the MRMTC Regional Tribal Engagement (RTE) Work Group
- Mike and Rodney will serve on the MRMTC Consent-Based Siting Request for Information Ad Hoc Working Group (CBS RFI AHWG)
- Mike, Rodney, and James Rashilla (when he returns from active duty with the Nebraska National Guard) will serve on the [National Transportation Stakeholders Forum \(NTSF\) Planning Committee](#)
- Kelly, Edward Engle, Tom Forbes, Jamie Reyes, Waylon Sanford, and Brian Vercruysse will serve on the [NTSF Spent Nuclear Fuel \(SNF\) Rail/Routing AHWG](#)
- Greg, Swapan Saha, and Ryan Seabaugh will serve on the [NTSF Section 180\(c\) AHWG](#)
- Greg, Christopher Boswell, and Tad Rumas will serve on the [NTSF Transportation Emergency Preparedness Program \(TEPP\) AHWG](#)
- Mike and Rodney will participate in the U.S. Department of Energy Office of Nuclear Energy (DOE-NE) Transportation Core Group
- All will send [Mitch Arvidson](#) session ideas for the MRMTC Spring 2022 Meeting and the 2022 Annual Meeting of the NTSF
- All will send Mitch any comments you may have on the *Revised Draft Railcar Safety Inspection Protocol* by January 31, 2021 (ask Mitch for a copy if you don't have one)
- All will use the MRMTC RTE Work Group's [brochure](#) and [guidance](#) to establish and grow relationships with Tribes in your area
- All will provide updated state information for the [Planning Guide for Shipments of Radioactive Material through the Midwestern States](#) to Mitch ahead of the MRMTC Spring 2022 Meeting
- All will mark calendars for the 2022 Annual Meeting of the NTSF: June 6 – 9, 2022, in Philadelphia, Pennsylvania
- All will mark calendars for the MRMTC Spring 2022 Meeting: June 7, 2022, in Philadelphia, Pennsylvania

### Staff:

- Mitch will work to have a presentation on the Kewaunee decommissioning and shipping project at a future meeting of the MRMTC
- Mitch will get information to Greg about the Waste Isolation Pilot Plant Training Exercise (WIPP TREX)
- Mitch will send Mark examples of state legislation that created fees on radioactive materials shipments
- Mitch will post all presentations to the [committee website](#)
- Mitch will complete a meeting summary and post it to the committee website
- Mitch will send a travel expense form to all eligible attendees
- Mitch will take session ideas from this meeting to the NTSF Agenda Planning Subcommittee
- Mitch will continue to plan for two committee meetings per year
- Mitch will solicit state information updates for *Planning Guide for Shipments of Radioactive Material through the Midwestern States*
- Mitch will coordinate with DOE-NE on any site visit(s) that they may have in the Midwest region in 2022

### Observers/Others:

- All will let Mitch know if they want one or more hard copies of the [Transportation Institutional Issues Archive: The Post Yucca Mountain Years](#) or the 2019 edition of the *Planning Guide for Shipments of Radioactive Material through the Midwestern States*